

**Practice A**

For use with pages 82–87

**Identify the hypothesis and the conclusion of the if-then statement.**

1. If two angles have the same measure, then the angles are congruent.
2. If two angles form a linear pair, then the angles are supplementary.
3. If the sum of the measures of two angles is  $90^\circ$ , then the angles are complementary.
4. If the measure of an angle is  $90^\circ$ , then the angle is a right angle.

**Rewrite the statement as an if-then statement.**

5. I will purchase a school yearbook if it costs less than \$20.
6. Your team will travel to the state championship game if it wins the district championship.
7. You cannot ride your bicycle if it has a flat tire.
8. School will be cancelled if it snows six inches overnight.

**Using the Law of Detachment, what can you conclude from the true statements?**

9. If  $x$  has a value of 4, then  $3x + 1$  has a value of 13. The value of  $x$  is 4.
10. If the measure of an angle is between  $0^\circ$  and  $90^\circ$ , then the angle is acute. The measure of an angle is  $51^\circ$ .

**In Exercises 11–13, use the Law of Syllogism to write the statement that follows from the pair of true statements.**

11. If a number is divisible by 4, then the number is divisible by 2. If a number is divisible by 2, then the number is even.
12. If the perimeter of a square is 12 centimeters, then the length of a side of the square is 3 centimeters. If the length of a side of a square is 3 centimeters, then the area of the square is 9 square centimeters.
13. If the picnic is cancelled, then the food will go to waste. If it rains, then the picnic will be cancelled.
14. Rewrite the following advertising slogan as an if-then statement:  
“Want to look younger? Try our Creme de Youth for thirty days.”
15. A billboard advertises “Want a better job? Enroll in Seville College’s on-line degree program.” Rewrite the advertisement as an if-then statement.

**Practice B**

For use with pages 82–87

**Write the hypothesis and the conclusion of the if-then statement.**

1. If two planes intersect, then their intersection is a line.
2. If  $\angle A$  is acute, then the measure of  $\angle A$  is between  $0^\circ$  and  $90^\circ$ .
3. If the sum of the measures of two angles is  $180^\circ$ , then the angles are supplementary.
4. If the measure of an angle is between  $90^\circ$  and  $180^\circ$ , then the angle is obtuse.

**Rewrite the statement as an if-then statement.**

5. Two angles that have the same measure are congruent angles.
6. Two angles that form a linear pair are supplementary angles.
7. An angle that has a measure of  $90^\circ$  is a right angle.
8. An angle that has a measure between  $90^\circ$  and  $180^\circ$  is an obtuse angle.
9. A dog with proper training will not misbehave.

**What law of logic is illustrated in the following statements?****What can you conclude if the statements are true?**

10. If you earn more than \$14, you can buy a new CD. You earn \$15.
11. If the area of a square is 49 square inches, then the length of a side of the square is 7 inches. If the length of a side of a square is 7 inches, then the perimeter of the square is 28 inches.

**In Exercises 12 and 13, write the statement that follows from the pair of true statements.**

12. If the width of a rectangle is 5 centimeters and the length of the rectangle is 2 centimeters, then the area of the rectangle is 10 square centimeters.  
The width of a rectangle is 5 centimeters and the length of the rectangle is 2 centimeters.
13. If a number is divisible by 10, then the number is divisible by 2. If a number is divisible by 2, then the number is even.
14. Rewrite the following advertising slogan as an if-then statement: "Want to learn about computers? Try our Computer Wizard tutorial for thirty days."
15. Identify the hypothesis and the conclusion of the if-then statement in Exercise 14.